

Chapter 4 – Right of Way Engineering Mapping

January 2008

#### 4-5 RIGHT OF WAY APPRAISAL MAP

Right of Way Appraisal Maps are created to show land and improvements to be acquired for transportation facility right of way and non-operating right of way.

**NOTE:** When it is cost effective and timely to do so, use any available mapping (Existing RW Record Maps, subdivision map, previous appraisal map, etc.). For example, use existing RW Record Map for Temporary Construction Easement (TCE) only acquisition.

#### 4-5.1 Use

Right of Way Appraisal Maps may be used by different functions for various purposes. The following are some examples of such use.

- By APPRAISALS: For location of and familiarization with property; for assistance in determining property value and severance damages, for use in Appraisal Reports.
- By ACQUISITION: For familiarization with property to be acquired and by property owner as an aid to understanding the proposed acquisition.
- By PROJECT DEVELOPMENT: For certification.
- By UTILITIES: For utility relocation.
- By R/W ENGINEERING: As base for additional mapping; for temporary record map and as the base for the final R/W maps.
- By R/W CLEARANCE: For relocation and clearance of improvements.

## 4-5.2 Map Requirements

The following information should appear on the Right of Way Appraisal Map, as applicable.

#### 4-5.2.1 Location Data

- Rancho, Section, Township, Range, Meridian, subdivision, federal and state boundaries, property lines -Lines and corners labeled to indicate whether approximate, found, calculated, or record. Abbreviate Government Tracts and Lots as GOVT.
- Name of county, city, town; subdivision with recordation data, lot, block; city and county limit lines
- Street names and widths (if uniform)
- Waterways; rivers, creeks, lakes, etc.
- Railroad rights of way and widths
- Existing landmarks (by name), parks, schools, airports
- County, route, Post Mile (in title block)

#### 4-5.2.2 Property Lines

 Annotate appropriately to indicate if lines were located or calculated from record information. Delineate the limits of the ownership on the appraisal map. If necessary use shortened lines, inset map, or show on index map.

# 4-5.2.3 Design Line / Record Right of Way Centerline Data

- Stationing, curve data, bearings, and distances.
- Design Line Shall have same designation as design plans. (e.g. "A-1"). Ramp alignments, etc., only if necessary to clarify proposed R/W.



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- Post Mile on Design Line at approximate center of sheet.
- Label record R/W centerline, Reference Lines, or Alignments as "Record ...". Show other alignments, as needed, with stationing as a minimum to clarify the proposed right of way.

#### 4-5.2.4 Topography

- Topography to be shown, if available.
- All building improvements within the proposed right of way.
- Building improvements on remainders unless such improvements are so remotely located that they will not be either physically or economically affected by State's requirements.
- All pertinent man-made culture and natural features such as sidewalks, curbs, foundations, walls, fences, trees and shrubbery, wells, ditches, waterways (rivers, creeks, lakes, etc.), power lines and telephone lines, driveways and both surface and underground pipelines (or evidence of such).
- Contour lines where appropriate.

#### 4-5.2.5 Parcel Data and R/W Lines

 Ownership numbers and numbers assigned as described in Right of Way Manual. Each primary right of way requirement shall have the identical number as the ownership of which it is all or a portion and shall have the suffix "-1" added. Each secondary right of way requirement, or subparcel, will be identified by a dash and sequential numerical suffix following the parcel number.

- Excess identified by 10 digit (maximum) number, as described in R/W Manual.
- Remainders will not be given parcel number.
- If more than one remainder and/or excess exists for a specific parcel, show separate areas on plan view at proper location.
- Underlying Fee area (e.g. U.F. = 1.2 acres) shall be shown in plan view, for each separate area, if more than one area comprises the total shown in Ownership Record Block.
- Dimensions of ownerships\*, R/W requirements and remainder. Dimensions shall include bearings, distances, and curve data. Radial bearings, if shown, shall read from center of curve. (\* A total take completely within the R/W may be described by its record dimensions and the area corrected if necessary by further calculation. Refer to the Right of Way Engineering chapter of the R/W Manual.)
- Easements to be acquired: dimensioned and labeled as to purpose.

NOTE: If parcel becomes a total acquisition, as shown on example map in Section 4-5.2.12, rights to be acquired for others should continue to be shown. (See Parcel 31054-2.)



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- Existing easements involved in the project are to be shown and labeled. Plot location of easements of record that are in or near the take area. Show evidence of unrecorded easements or encroachments such as utilities, fences or access. (See topography).
- Show proposed frontage roads and other collateral facilities.
- New R/W lines labeled as "Proposed R/W" and delineated with a heavier line weight than existing.
- Existing R/W Dimension existing right of way lines with bearings, distances and curve data. Include an explanatory note if necessary to clarify relative accuracy of existing R/W. Label as "Existing R/W".
- R/W lines that are superseded by the new acquisition will be broken and the same weight as existing.

#### 4-5.2.6 Parcel Bubbles

- Regular acquisition use a hot dog shape, flooded with color assigned ownership.
- Parcels not to be vested in State use rectangular shape, flooded with color assigned ownership. There is no distinction between parcels acquired for third party vs. parcels acquired by State to be deeded to third party.
- Excess parcels use a hot dog shape flooded with color assigned ownership.

#### 4-5.2.7 Ownership Record

- Parcels, numbers and ownership names tabulated in block.
- Flood each row in block with same color assigned ownership.

- Areas: total ownership (as defined in R/W Manual), R/W requirement, excess, and remainder.
- Underlying Fee: Area to be shown in parenthesis in same cell as related area above, e.g. R/W requirement area (UF area), excess area (UF area).
- If Underlying Fee is not easily ascertainable, do not map. Indicate existence by placing a (Y) where area would normally be shown in the cell. Note: "If any" clause to be used in legal description. District/Region discretion (in conjunction with R/W and Legal) to be used in relation to Resolution of Necessity descriptions.
- Where practical, use same units of measure for all areas shown.
- The sum of the required, excess, UF, and remainder areas should equal total area.
- Easements to be acquired: purpose and ultimate grantee (if not purchased for State) listed in remarks column of vesting block.
- Assessor's Parcel Number in Plan View (Optional)

#### **4-5.2.8 Coloring**

- Individual ownerships shall have a distinctive color (except YELLOW) assigned. All ownerships with the same vesting shall be assigned the same color.
- Fee or Highway Easement flood with color assigned ownership.



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- Other easements (TCE, drainage, slope, utility, etc.) – outlined with solid line colored same as ownership.
- Excess parcels flooded in YELLOW if identified prior to transmittal.
- Underlying Fee if being acquired outlined with solid line colored same as ownership, if not being acquired line will be dashed.
- Remainder outlined by long dashed line in color assigned ownership.

NOTE: Coloring is only an aid. All mapping information must be independently legible.

#### 4-5.2.9 Coordinates

- Monuments that are referenced in the legal descriptions for the parcel to be acquired will be shown on the appraisal map with coordinates. Show tie to R/W line, if necessary.
- If no monuments are shown, then enough coordinate pairs on RW angle points will be shown so that coordinate locations of remaining RW angle points can be calculated.

#### 4-5.2.10 Access Information

- Current requirements, identified by access denial ticks.
- Access rights previously acquired labeled, with clarifying note if necessary.
- Access to remainders (topography or record easement).
- Frontage roads.
- Grade separation labeled.
- Access openings: symbol, size, ties to right of way line (DO NOT tie to Design line).

## 4-5.2.11 Map Background

- Topography.
- Contours, if needed.
- Basis of Bearing (when California Coordinate System used, include clause, grid factor and zone).
- North arrow, legend.
- Title block:
  - 1) Title: Right of Way Appraisal Map
  - 2) County, route, Post Mile.
  - 3) Bar Scale.
  - 4) To Design: (Date of initial transmittal to Design does not change with revisions)
  - 5) Map file number. (Optional per District system)
  - 6) Project EA
  - 7) Federal Aid Project (FAP) number to right of EA. Note: Contact R/W Planning and Management Branch for proper numbering.
- Revision block with date, description of changes, and First Initial – Last Name of person making revision.
- Reference block (optional) but refer at least to R/W EA.
- References to other highway routes and map numbers of intersecting projects.
- Drawing path name lower left, below border.



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#### **4-5.2.12** Use of Details

- Use when needed to clarify dimensioning. Place close to parcel, or add note "See Detail 'A'", etc.
- If not drawn to scale must be so labeled.
- Repeat at least one parcel number and one dimension for reference.
- If necessary to rotate detail, use additional north arrow.
- Labels in bold to stand out
- Coloring and delineation should be the same as rest of appraisal map.
- Border details with a dashed black line or show detail on a separate page.

See example of Right of Way Appraisal Map.

## 4-5.3 Right of Way Appraisal Index Map

Utilize existing city or county map, freeway exhibit map or any available map of adequate scale. Reproduce by using template or by cut and paste drafting.

## 4-5.3.1 Index Map Requirements

- Limits of map set (layout of map sheets) and limits of project.
- Existing roads and streets.
- City names, ranchos, section and township information.
- Landmarks schools, parks, etc., as necessary (by name)
- County, route, Post Mile range (e.g. 0.0/10.0) Note: Map should be oriented with Post Miles increasing from left to right.
- Direction arrows to neighboring cities or towns. Also, for rural projects show approximate mileage.

- Ownership numbers only will be shown on the index map.
- Outline of each map identified by sheet number.
- Title Right of Way Appraisal Index Map
- Bar Scale (optional).
- North arrow.
- Legend, if applicable.
- Reference to adjacent and intersecting state routes.
- Coloring may be used to delineate boundary of larger parcels that cannot be shown on appraisal map sheet.
- Revision block will be shown on index map and used only to record revisions to the index map.
- Index Map to be numbered as sheet 1.

See example of Right of Way Appraisal Index Map.

References: R/W Manual





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